

Applicant: Marinus Gerardus Johannus Van Beuningen  
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Amendments to the Specification:

On page 6, please amend the second paragraph as follows:

The support member may be arranged to or in the housing by moulding, gluing, thermal bonding, light curable bonding, chemical bonding or the like. Preferably, the support member is connected with the housing across the complete internal cylindrical cavity or bore of the body, thereby forming a barrier in the internal passageway hindering the flow or passage of liquids and gases. As a result liquids are directed through the channels of the support member, while not through openings between the wall of the housing and the support member, having less resistance. Any openings between the support member and the wall of the housing or the distal end of the housing may be closed by sealing materials, such as for instance silicones, rubber and the like. Glues applicable for attaching the support member to the housing are known in the art, such as for instance polydimethylsiloxane, e.g. SYLGARD® Sylgard 182 or SYLGARD® Sylgard 184 (Dow Corning, Midland, Mich., USA), glues based on siloxanes, polyurethane based glues, epoxide resin based glues, cyanacrylate based glues, acryl based glues and/or heat based glues.

On page 17, please amend the first two full paragraphs as follows:

In general, the read time for a micro-array will depend on the photo physics of the fluorophore (i.e. fluorescence quantum yield and photo destruction yield) as well as the sensitivity of the detector. For fluorescein, sufficient signal-to-noise to read a micro-array image with a CCD detector can be obtained in about 0.001-30 seconds using 3 mW/cm<sup>2</sup> and 488 nm excitation from an Ar ion laser or halogen lamp. By increasing the laser

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power, and switching to dyes such as CY3® Cy3 or CY5® Cy5 which have lower photo destruction yields and whose emission more closely matches the sensitivity maximum of the CCD detector, one easily is able to read each micro-array in less than 5 seconds.

A variety of different labels may be employed, where such labels include fluorescent labels, isotopic labels, enzymatic labels, particulate labels, etc. For example, suitable labels include fluorochromes, e.g. fluorescein isothiocyanate (FITC), rhodamine, Texas Red, phycoerythrin, allophycocyanin, 6-carboxyfluorescein (6-FAM), 2',7'-dimethoxy-4',5'-dichloro-6-carboxy-fluorescein (JOE), 6-carboxy-X-rhodamine (ROX), 6-carboxy-2',4',7',4,7-hexachloro-fluorescein (HEX), 5-carboxyfluorescein (5-FAM) or N,N,N',N'-tetramethyl-6-carboxy-rhodamine (TAMRA), cyanine dyes, e.g. CY5® Cy5, CY3® Cy3, BODIPY® dyes, e.g. BODIPY® 630/650, Alexa542, etc. Suitable isotopic labels include radioactive labels, e.g.  $^{32}\text{P}$ ,  $^{33}\text{P}$ ,  $^{35}\text{S}$ ,  $^3\text{H}$ . Other suitable labels include size particles that possess light scattering, fluorescent properties or contain entrapped multiple fluorophores. The label may be a two stage system, where the primer and/or probe is conjugated to biotin, haptens, etc. having a high affinity binding partner, e.g. avidin, specific antibodies, etc. The binding partner is conjugated to a detectable label, e.g. an enzymatic label capable of converting a substrate to a chromogenic product, a fluorescent label, an isotopic label, etc.